

INITIAL REVIEW ENGINEERING REPORT  
PMN: 17-1234

CBI: Yes

Contractor Draft 12/22/2017

ENGINEER: Eric A. Searcy \

PV (kg/yr): [REDACTED] YX

SUBMITTER: Koch Agronomic Services

USE: Additive for urea containing fertilizer.

OTHER USES:

MSDS: Yes

Label: No

Gen Eqpt:

Respirator:

Health Effects:

TLV/PEL:

CRSS :

Chemical Name: Urea, reaction products with N-butylphosphorothioic triamide and formaldehyde

Chemical Category: Class 2

S-H20: 0.035 g/L @ 25.00

VP: 3.3E-6 torr @ 20.00

MW: 225.00 100.00%<500 %<1000

Physical State and Misc CRSS Info:

The substance is manufactured within a solution. Once applied to the urea substrate, the substance is absorbed on to the surface of the urea.

Consumer Use: No

SAT (concerns) :

Migration to groundwater:

PBT rating: PBT

Health:

Eco:

OCCUPATIONAL EXPOSURE RATING: 2-3D

NOTES & KEY ASSUMPTIONS:

Generated by the 09/30/2013 version of ChemSTEER.

POLLUTION PREVENTION CONSIDERATIONS:

This chemical is replacing a well known substance with a similar structure and safety characteristics. It is not expected to bioaccumulate.

EXPOSURE-BASED REVIEW: Yes (1 criteria met)

- 1) # of workers exposed: [REDACTED] >1000? Yes
- 2) >100 workers with >10 mg/day inhalation exposure: No
- 3) (a) >100 workers w/1-10 mg/day inh. exp. & >100 days/yr: No  
(b) Routine Dermal Cont: >250 workers & >100 days/yr: No

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Manufacturing

Number of Sites/ Location: [REDACTED]

[REDACTED]

Days/yr: [REDACTED]

Basis:

Process Description: A fertilizer additive is produced by adding solid and liquid raw materials to a vessel and subsequently discharging a liquid.

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium.

[REDACTED]  
[REDACTED]  
[REDACTED]

to:  
from: Loading Liquid Product into Totes  
basis: EPA/OAQPS AP-42 Loading Model.

[REDACTED]  
[REDACTED]  
[REDACTED]

to:  
from: Sampling Liquids  
basis: EPA/OPPT Mass Transfer Coefficient Model.

[REDACTED]  
[REDACTED]  
[REDACTED]

to:  
from: Sampling Liquids  
basis: EPA/OPPT Penetration Model.

[REDACTED]  
[REDACTED]

to:  
from: Equipment Cleaning Losses of Liquids from a Single, Large Vessel  
basis: EPA/OPPT Single Vessel Residual Model, CEB standard 1% residual.

E TOTAL  
[REDACTED] kg/yr - all sites

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY  
Tot. # of workers exposed via assessed routes: 3  
Basis:

Inhalation:

Exposure to Particulate (volatile) (Class I)

Upper Bound:

> [REDACTED]

Number of workers (all sites) with inhalation exposure: 1

Basis: Equipment Cleaning Losses of Liquids from a Single, Large Vessel;  
OSHA PEL-Limiting Model for Substance-specific Particulates (TWA or C).

NOTE: The respirator class is: I. Particulate (including solid or liquid droplets).

#### INHALATION MONITORING DATA REVIEW

- 1) Uncertainty (estimate based on model, regulatory limit,  
or data not specific to industry): Yes
- 2)a) Exposure level > 1 mg/day? Yes
- OR
- b) Hazard Rating for health of 2 or greater? No
- => Inhalation Monitoring Data Desired? **No**

Dermal:

Exposure to Solid at [REDACTED] concentration  
High End:

> [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Number of workers (all sites) with dermal exposure: 1

Basis: Equipment Cleaning Losses of Liquids from a Single, Large Vessel;  
EPA/OPPT Direct 2-Hand Dermal Contact with Solids Model.

Exposure to Liquid at [REDACTED] concentration  
High End:

> [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Number of workers (all sites) with dermal exposure: 1

Basis: Loading Liquid Product into Totes; EPA/OPPT 2-Hand Dermal Contact  
with Liquids Model.

Exposure to Liquid at [REDACTED] concentration  
High End:

> [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Number of workers (all sites) with dermal exposure: 1

Basis: Sampling Liquids; EPA/OPPT 1-Hand Dermal Contact with Liquids  
Model.

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PMN: 17-1234

Distributor Processing

Number of Sites/ Location: 500

Days/yr: 30

Basis:

Process Description: Product is applied to granular urea by mixing in a blending operation

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium.

[REDACTED]  
[REDACTED]

to:

from: Cleaning Liquid Residuals from Totes Used to Transport the Raw Material

basis: EPA/OPPT Bulk Transport Residual Model, CEB standard 0.2% residual.

L

[REDACTED] - all sites

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY

Tot. # of workers exposed via assessed routes: 1,000

Basis:

Inhalation:

Dermal:

Exposure to Liquid at [REDACTED] concentration

High End:

> [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Number of workers (all sites) with dermal exposure: 500

Basis: Unloading Liquid Raw Material from Totes; EPA/OPPT 2-Hand Dermal Contact with Liquids Model.

Exposure to Liquid at [REDACTED] concentration

High End:

> [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Number of workers (all sites) with dermal exposure: 500

Basis: Cleaning Liquid Residuals from Totes Used to Transport the Raw Material; EPA/OPPT 2-Hand Dermal Contact with Liquids Model.



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User application

Number of Sites/ Location: 10,000

Days/yr: 30

Basis:

Process Description: The granular mixture material is spread on the agricultural field.

ENVIRONMENTAL RELEASES ESTIMATE SUMMARY

IRER Note: The daily releases listed for any source below may coincide with daily releases from the other sources to the same medium.

OCCUPATIONAL EXPOSURES ESTIMATE SUMMARY

Tot. # of workers exposed via assessed routes: 0

Basis:

Inhalation:

Dermal:

CBI: No

MEMORANDUM of TELEPHONE CONVERSATION (Contains No TSCA CBI)

CALL BY:

Organization:

CALL TO:

Organization:

Date:

Time:

Phone:

Concerning what?

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